

REMARKS

Claims 1-8, 16-22, 31-44, 70-77, 88, 89, 97-108, 113-115, 118-120 and 150-203 are pending. By this amendment, claims 9-15, 23-30, 45-63, 65-69, 78-87, 90-96, 109-112, 116, 117 and 121-149 are canceled, claims 1, 3, 4, 16-22, 31, 34-37, 39-42, 70, 89, 97, 104-106, 113, 118 and 119 are amended, and new claims 150-203 are added. Therefore, claims 1-8, 16-22, 31-44, 70-77, 88, 89, 97-108, 113-115, 118-120 and 150-203 are pending for consideration, with claims 1, 16, 31, 34, 70 and 152, 156, 181 and 192 being independent claims.

I. 35 USC §112 Rejections

Item 2 of the Office action rejects claims reciting “download” under 35 USC §112. Claims 16-20 and 31 are amended to change “download” to “send.”

Item 3 of the Office Action rejects claims 104-106 under 35 USC §112 for reciting “the building location.” These claims are amended to overcome this rejection.

Accordingly, withdrawal of the §112 rejections is requested.

II. 35 USC §§102 and 103 Rejections

Item 2 of the Office Action rejects claims 1, 2, 4, 8, 34, 37, 40, 41 and 44 under 35 USC 102(b) over U.S. Patent 5,068,798 to Heath et al. Item 10 of the Office Action rejects claims 3, 7, 16-22, 31, 33, 35, 36, 42, 70-74, 76, 77, 97-99 and 120 under 35 USC 103(a) over Heath in view of U.S. Patent 5,468,968 to Bailey et al. Item 34 of the Office Action rejects claims 5 and 39 under 35 USC 103(a) over Heath in view of Bailey and U.S. Patent 5,822,745 to Hekmatpour. Item 38 of the Office Action rejects claims 32, 75 and 119 under 35 USC 103(a) over Heath in view of Bailey and U.S. Patent 5,000,052 to Sipin. Item 43 of the Office Action rejects claims 6, 43, 78, 79, 81, 83, 85, 87 and 121 under 35 USC 103(a) over Heath in view of Bailey and U.S. Patent 6,111,501 to Honeyager et al. Item 53 rejects claim 82 under 35 U.S.C. 103(a) over Heath in view of Bailey, Honeyager and U.S. Patent 5,307,667 to Caron. Item 57 rejects claim 87 under 35 USC 103(a) over Heath in view of Bailey, Honeyager and U.S. Patent 6,085,576 to Sunshine et al. Item 60 rejects claims 88 and 89 under 35 USC 103(a) over Heath in view of U.S. Patent 6,275,942 to Bernhard et al. Item 64 rejects claims 107-113 under 35 USC 103(a) over Heath in view of U.S. Patent 5,908,383 to Brynjestad.

Best Available Copy

These rejections are respectfully traversed for at least the reasons set forth below.

A. Claims 1-8, 16-22, 34-44, 104-108, 113-115 and 150-164 and 169-202

New independent claims 152 and 156 are styled after independent claim 1, and therefore are similar to claim 1 except in their definition of the method the expert system uses for controlling an air monitoring unit. Claims 1, 152 and 156 recite a computer including an expert system for controlling the air monitoring unit that uses at least (a) a rule-based method (claim 1), (b) a case-based method (claim 152), or (c) a pattern-recognition method using fuzzy reasoning over patterns (claim 156).

New independent claims 181 and 192 are styled after independent claim 34, and are similar except in their definition of the method the expert system uses to analyze acquired air quality data. Claims 34, 181 and 192 recite an expert system for analyzing acquired air quality parameter data using at least (a) a rule-based method (claim 34), (b) a case-based method (claim 181), or (c) a pattern-recognition method using fuzzy reasoning over patterns (claim 192).

Independent claim 16 recites an expert system interactive with the air quality parameter data for analysis of the air quality parameter data, the expert system using at least one of a rule-based method, a case-based method, or a pattern recognition method using fuzzy reasoning over patterns to process the air quality parameter data.

Applicants respectfully submit that Heath and Bailey (the only references applied against claims 1, 16 and/or 34) do not teach or suggest the use of expert systems as set forth in claims 1, 16, 34, 152, 156, 181 and 192. The Office Action at Item 65 indicates that Heath does not teach an expert system “which can accept feedback, where data mining is used, which uses rule based, case based, fuzzy logic, or pattern recognition methods or where a combination of two or more of these systems.” (emphasis added) Bailey also does not teach or suggest use of expert systems employing a rule-based method, a case-based method, or a pattern recognition method using fuzzy reasoning over patterns, see e.g., col. 12, lines 10-24 discussing the use of “conventional programming techniques”...“that incorporate structured sub-routines and modules.” Thus, these references cannot support a prima facie case of anticipation or obviousness of the above claims.

In rejecting claims 107-113 which recited various expert system methods, the Office Action relied on Brynjestad for disclosure of expert system methods, and indicates that the use of

such methods in Heath would have been obvious. However, Brynjestad relates to a "Knowledge-based Expert Interactive System for Pain" and in no way teaches or suggests that any of the disclosed systems could or should be used in an air monitoring system for analysis of air quality parameter data or control of an air monitoring unit. Thus, Brynjestad is not analogous art to the claims of this application since it is not "in the field of the applicant's endeavor" or "reasonably pertinent to the particular problem with which the inventor was concerned." See MPEP 2141.01(a). Claims in this application have no relation whatsoever to pain management, and thus one of skill in the art would not have been motivated to consider Brynjestad when considering how to analyze air quality data or control an air monitoring unit. This is supported by the fact that Heath is completely silent as to the use of expert systems in its arrangement, and therefore provides no motivation to look to any expert system-specific references outside of the air quality data analysis and control field. Accordingly, Brynjestad is not analogous art and any §103 rejection based on Brynjestad, such as that in Item 64 of the Office Action, is improper.

However, even assuming that Brynjestad is analogous art, one of skill in the art with knowledge of the disclosures of Heath and Brynjestad (but without the benefit of the disclosure in this application) would be left entirely in the dark as to how an expert system could be used in the Heath system. Nothing in Heath suggests the use of an expert system, and Brynjestad makes no suggestion how an expert system could be used as set forth in the claims. The only way that the disclosures of Heath and Brynjestad could be seen to suggest the use of an expert system as claimed is with the benefit of hindsight using this application as a guide. Accordingly, one of skill in the art would not have been motivated to combine Heath and Brynjestad as suggested in the Office Action, and would not have had any reasonable expectation of success in making such a combination.

Accordingly, independent claims 1, 16, 34, 152, 156, 181 and 192, and:
claims 2-8, 88, 89, 150 and 151 which depend from claim 1,
claims 17-22 and 160-164 which depend from claim 16,
claims 35-44, 104-108, 113-115 and 169-180 which depend from claim 34,
claims 153-155 which depend from claim 152,
claims 157-159 which depend from claim 156,
claims 182-189 which depend from claim 181, and

claims 193-202 which depend from claim 192,
are allowable.

B. Claims 31-33, 97-103 and 165-168

Independent claim 31 recites that “the remote control unit is adapted to send a command using the communications link to the air monitoring unit to trigger the grab sampler to acquire an air sample.” Heath does not disclose a grab sampler, as indicated in Item 22 of the Office Action. Although Bailey discloses grab sampling, e.g., at col. 2, line 35, the grab sampling in Bailey occurs in response to manual manipulation by an operator. Thus, Bailey does not teach or suggest an arrangement in which a remote control unit sends a command using a communications link to an air monitoring unit to trigger the grab sampler to acquire an air sample. Instead, an operator in Bailey manually triggers sampling. See, for example, col. 6, lines 44-59 describing that a filter is loaded and the holder is immediately actuated.

Accordingly, independent claim 31, and claims 32, 33, 97-103 and 165-168 which depend from claim 31 are allowable.

C. Claims 70-77, 118-120 and 203

Independent claim 70 recites a control unit for generating a grab sample command in response to the acquired sensor data meeting a predetermined criteria, and a grab sample unit for acquiring an air sample at the selected indoor location in response to the grab sample command from the control unit. As discussed above, the Office Action indicates in Item 22 that Heath does not teach or suggest a grab sampler. Bailey discloses grab sampling, but sampling does not take place in response to a command from a control unit as set forth in claim 70. Instead, grab sampling in Bailey takes place in response to a manual manipulation by an operator. There is no teaching or suggestion in Bailey that a grab sampler acquire a sample in response to a command from a control unit. In addition, claim 70 recites that the grab sample command is generated in response to acquired sensor data meeting a predetermined criteria. Since Bailey does not teach or suggest a grab sample command from a control unit, Bailey also does not teach or suggest generating such a signal in response to acquired sensor data.

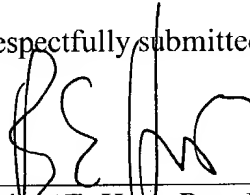
Accordingly, independent claim 70, and claims 71-77, 118-120 and 203 which depend from claim 70 are allowable

CONCLUSION

Accordingly, Applicant submits that this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-8, 16-22, 31-44, 70-77, 88, 89, 97-108, 113-115, 118-120 and 150-203 are requested.

If, for any reason, the Examiner believes that a telephone conversation with the Applicants' representative would expedite prosecution, the Examiner is invited to contact the undersigned at the telephone number below.

Respectfully submitted,



Robert E. Hunt, Reg. No. 39,231
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2210
Tel. (617) 720-3500
Fax. (617) 720-2441

Docket No.: A0744.70003US00
Date: September 22, 2004
x07/22/04